(12) INTERNATIONAL LICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 3 June 2004 (03.06.2004)

PCT

(10) International Publication Number WO 2004/045990 A3

(51) International Patent Classification⁷: B65F 1/00, 3/00

(21) International Application Number:

PCT/GB2003/004837

(22) International Filing Date:

10 November 2003 (10.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0226988.4

20 November 2002 (20.11.2002) GB

(71) Applicant and

(72) Inventor: UNDERWOOD, Michael, Frederick [GB/GB]; 44 Y Lanfa, Trefechan, Aberystwyth, Ceredigion SY23 1AS (GB).

(74) Agents: CARPENTER, David et al.; Marks & Clerk, Alpha Tower, Suffolk Street Queensway, Birmingham B1 1TT (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

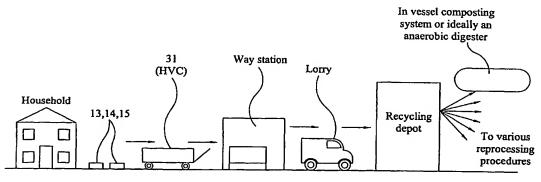
(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 10 September 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WASTE MANAGEMENT SYSTEM



(57) Abstract: A waste management system comprising providing householders with waste collection units (10, 11) having predetermined collection containers (13, 14, 15) for predeter-mined categories of waste whereby the householder performs a preliminary sorting of his waste into said predetermined categories, providing a household collection vehicle (31) having collection containers for at least the waste categories sorted by the householder, providing a way-station at which categorised waste from the collection vehicle can be temporarily stored, providing a way-station collection vehicle (lorry) having the facility to transport said categorised waste from a plurality of way-stations, and providing a recycling depot at which categorised waste from said way-station collection vehicle can be distributed for recycling or disposal.



International Application No PCT/GB 03/04837

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B65F1/00 B65F3/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 $\label{lem:minimum} \begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{B65F} \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

Category °	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to daim No.
х	US 5 511 687 A (B. GARRETT, JR. ET AL.) 30 April 1996 (1996-04-30)	1,3,4, 12,13,
A	column 5, line 19 - column 7, line 57 figures 1-3	17,18 14-16
x	DE 40 01 768 A (D-TEAM DESIGN GMBH) 25 July 1991 (1991-07-25) column 6, line 43 - column 7, line 12 figure 1	1,3,4, 12,17,18
X	US 5 222 853 A (W. CARSON) 29 June 1993 (1993-06-29) column 5, line 28 - column 6, line 22 column 7, line 61 - column 8, line 52 column 8, line 64 - column 10, line 27 figures 1,2,7	1,3,4, 12,17
	-/	

X Further documents are listed in the continuation of box C.	X Patent family members are listed in annex.		
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the International filling date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the International filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed Invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "8" document member of the same patent family		
Date of the actual completion of the international search	Date of mailing of the International search report		
19 March 2004	0 2, 07, 2004		
Name and mailing address of the ISA	Authorized officer		
European Patenti Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Smolders, R		



International Application No
PCT/GB 03/04837

		PC1/GB 03/0403/
	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	LOsbosonto eleberto
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Х	DE 41 01 052 A (L. AICHELE) 23 July 1992 (1992-07-23)	12,13
Y	the whole document	14-16
Х	DE 92 01 259 U (C. THIES) 26 March 1992 (1992-03-26)	12
γ	the whole document	14-16
X	EP 0 997 400 A (P. VIEIRA DOS SANTOS) 3 May 2000 (2000-05-03)	12
A	the whole document	13,14
X	EP 0 555 939 A (VAN KRAAIKAMP ET AL.) 18 August 1993 (1993-08-18) the whole document	17-19
X	US 5 842 652 A (J. WARSING) 1 December 1998 (1998-12-01) the whole document	17-19
X	FR 2 782 311 A (ROS ROCA SA) 18 February 2000 (2000-02-18) the whole document	17,18
Х	DE 85 30 006 U (H. RICHTER) 14 April 1988 (1988-04-14) the whole document	17
<i>:</i> :		· · · · ·
		, .

Form PCT/ISA/210 (continuation of second sheet) (January 2004)



International application No. PCT/GB 03/04837

Box I	Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This Inte	emational Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1.	Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2.	Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3.	Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II	Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This Inte	ernational Searching Authority found multiple inventions in this international application, as follows:
	see additional sheet
1.	As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.	As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
з	As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
	No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-19,23
Remark	on Protest The additional search fees were accompanied by the applicant's protest.
	No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-19,23

Waste management system comprising household waste collection units and a household waste collection vehicle.

2. claims: 20-22

Compactor for plastics material or metal cans.



•

International Application No PCT/GB 03/04837

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
US 5511687 A	30-04-1996	NONE		` ` `
DE 4001768 A	25-07-1991	DE WO EP	4001768 A1 9111376 A1 0511998 A1	25-07-1991 08-08-1991 11-11-1992
US 5222853 A	29-06-1993	NONE		
DE 4101052 A	23-07-1992	DE	4101052 A1	23-07-1992
DE 9201259 U	26-03-1992	DE	9201259 U1	26-03-1992
EP 0997400 A	03-05-2000	EP	0997400 A1	03-05-2000
EP 0555939 A	18-08-1993	NL AT DE DE EP	9200260 A 141571 T 69304093 D1 69304093 T2 0555939 A1	01-09-1993 15-09-1996 26-09-1996 02-01-1997 18-08-1993
US 5842652 A	01-12-1998	NONE		
FR 2782311 A	18-02-2000	ES FR	1040812 U1 2782311 A3	16-05-1999 18-02-2000
DE 8530006 U	14-04-1988	DE	8530006 U1	14-04-1988